**Homework Assignment #3** *Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. Define the following vocabulary terms in the vocab section of the packet: *electron cloud, energy level, atomic orbital, electron configuration, valence electron, Lewis dot diagram*.
2. Write the electron configurations for the following elements.
3. bromine 1s22s22p63s23p64s23d104p5
4. strontium 1s22s22p63s23p64s23d104p65s2
5. antimony 1s22s22p63s23p64s23d104p65s24d105p3
6. titanium 1s22s22p63s23p64s23d2
7. Write the Lewis dot diagrams for the elements listed in #1.

Sbr

Br

Srr

Ti

1. How many electrons occupy p orbitals in a chlorine atom?

1s22s22p63s23p5 11 electrons occupy p orbitals in the chlorine atom

6 in the 2p orbitals and 5 in the 3p orbitals